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ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 4/2  
14818C LANCE MISSILE NO. 2835, ROUND NO. 313 APT (15 MARCH 1978--ETC(U)  
APR 78

UNCLASSIFIED

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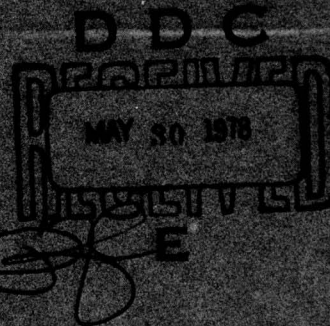


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WHEEL NO. 2435, WOUND NO. 313 APT  
(15 MARCH 1978)

BY

WIND HYDROLOGICAL TEAM



ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 14818C Lance, Missile Number 2835, Round Number 313 APT, are presented in tabular form.		

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# INTRODUCTION

14818C Lance, Missile Number 2835, Round Number 313 APT, was launched from LC-39, White Sands Missile Range (WSMR), New Mexico, at 1557 HRS MST, 15 Mar 78. The scheduled launch time was 1530 HRS MST.

# DISCUSSION

Meteorological data were recorded and reduced by the WSMR Meteorological Team, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. The data are presented in the following tabulations.

ELEVATION	4,064	FEET/MSL
PRESSURE	881.7	MBS
TEMPERATURE	16.6	°C
RELATIVE HUMIDITY	13	%
DEW POINT	-11.8	°C
DENSITY	1,057	GM/M <sup>3</sup>
WIND SPEED	06	MPH
WIND DIRECTION	340	DEGREES
CLOUD COVER	CLEAR	

TABLE I. SURFACE OBSERVATIONS TAKEN AT LC-39,  
1600 HRS MST/15 MAR 78.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	340	6.0	2500	353	5.5
800	010	6.0	2600	349	5.0
900	007	8.5	2700	322	4.5
1000	004	11.0	2800	294	4.0
1100	359	10.0	2900	298	3.5
1200	354	8.5	3000	302	3.0
1300	360	9.0	3100	298	3.0
1400	005	9.0	3200	294	3.0
1500	003	9.5	3300	266	3.0
1600	360	10.0	3400	237	3.0
1700	356	10.5	3500	241	4.0
1800	352	10.5	3600	245	4.5
1900	352	9.5	3700	258	5.0
2000	351	8.0	3800	270	5.0
2100	352	10.0	3900	283	4.5
2200	353	12.0	4000	296	4.0
2300	355	9.0	4100	291	5.5
2400	357	6.0			

TABLE II. PILOT-BALLOON-MEASURED WIND DATA, RELEASED FROM LC-39  
AT 1550 HRS MST/15 MARCH 1978  
14818C LANCE, MISSILE NO. 2835, ROUND NO. 313 APT

PIBAL RELEASE POINT WSTM COORDINATES:

X = 530,938.82 Y = 186,564.96 Z = 4,063.75

APPROXIMATELY: 1/2 MILE SOUTH OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH:



HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	286	6.5	6700	335	27.5
4300	302	8.5	6800	335	30.0
4400	317	10.0	6900	334	28.5
4500	320	11.0	7000	333	27.0
4600	323	12.0	7100	334	27.5
4700	328	15.5	7200	335	28.0
4800	332	18.5	7300	334	31.0
4900	328	16.0	7400	332	33.5
5000	323	13.0	7500	336	36.0
5100	321	14.5	7600	340	38.5
5200	318	15.5	7700	340	42.0
5300	312	15.5	7800	339	45.0
5400	306	15.5	7900	340	44.5
5500	312	17.0	8000	340	43.5
5600	318	18.5	8100	341	43.0
5700	320	19.5	8200	341	42.5
5800	322	20.5	8300	342	43.0
5900	325	22.0	8400	343	43.0
6000	328	23.0	8500	343	41.5
6100	330	24.0	8600	342	39.5
6200	331	24.5	8700	341	40.0
6300	330	23.5	8800	339	40.5
6400	329	22.5	8900	336	42.0
6500	332	24.0	9000	332	43.0
6600	335	25.0			

TABLE II. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	340	6.0	2100	329	2.5
100	260	3.0	2200	344	2.5
200	CALM		2300	344	4.5
300	176	2.0	2400	343	6.0
400	171	4.0	2500	319	5.0
500	192	3.5	2600	295	4.0
600	212	3.0	2700	305	4.0
700	286	6.5	2800	314	4.0
800	359	10.0	2900	324	5.5
900	354	7.0	3000	334	7.0
1000	348	4.0	3100	328	7.5
1100	349	3.5	3200	322	7.5
1200	350	3.0	3300	326	8.0
1300	347	4.0	3400	329	8.0
1400	343	4.5	3500	327	7.0
1500	351	4.0	3600	324	5.5
1600	358	3.5	3700	301	5.0
1700	359	3.5	3800	277	4.0
1800	360	3.5	3900	294	4.5
1900	337	3.0	4000	311	5.0
2000	313	2.0	4100	318	8.5

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASED FROM LC-39  
AT 1600 HRS MST/15 MARCH 1978  
14818C LANCE, MISSILE NO. 2835, ROUND NO. 313 APT

PIBAL RELEASE POINT WSTM COORDINATES:

X = 530,938.82    Y = 186,564.96    Z = 4,063.75

APPROXIMATELY: 1/2 MILE SOUTH OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.



HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	325	11.5	6700	335	29.0
4300	325	11.5	6800	335	33.5
4400	325	11.5	6900	335	32.0
4500	327	12.0	7000	334	30.0
4600	328	12.5	7100	335	29.5
4700	331	15.5	7200	336	29.0
4800	334	18.5	7300	337	31.5
4900	328	15.5	7400	337	33.5
5000	322	12.0	7500	340	36.5
5100	322	15.0	7600	342	39.0
5200	322	17.5	7700	339	38.0
5300	324	19.5	7800	336	37.0
5400	325	21.5	7900	337	37.5
5500	328	24.0	8000	337	37.5
5600	330	26.0	8100	337	38.5
5700	329	25.0	8200	336	39.5
5800	328	23.5	8300	338	40.5
5900	331	26.0	8400	340	41.5
6000	333	28.0	8500	342	41.5
6100	334	26.5	8600	343	41.5
6200	334	25.0	8700	343	46.5
6300	334	23.5	8800	343	51.0
6400	334	22.0	8900	343	54.5
6500	334	23.0	9000	342	57.5
6600	334	24.0			

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

GFODETC COORDINATES  
 32.62700 LAT DEG  
 106.39352 LON DEG

SIGNIFICANT LEVEL DATA

0740050010

APACHE

TABLE IV.

STATION ALTITUDE 3951.40 FEET MSL  
 15 MAR. 78 1530 HRS MST  
 ASCENSION NO. 10

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
885.4 3951.4	13.4	-11.9	16.0
870.6 4419.4	12.7	-9.0	21.0
850.0 5074.3	9.5	-11.1	22.0
700.0 10225.5	-4.0	-15.8	26.0
653.2 12001.7	-8.1	-23.7	27.0
607.2 13858.6	-8.8	-26.2	19.0
565.4 15658.5	-12.0	-31.4	18.0
547.0 16486.2	-13.2	-31.9	19.0
500.0 18704.7	-18.7	-34.6	23.0
451.8 21154.5	-24.0	-34.6	22.0
444.6 21537.6	-25.3	-40.7	22.0
428.2 22429.6	-26.3	-42.4	20.0
400.0 24031.6	-29.8	-44.6	22.0
372.0 25710.7	-34.1	-46.3	22.0
359.0 26524.7	-35.0	-48.7	23.0
314.4 29508.3	-42.2		
300.0 30539.3	-45.3		
279.0 32109.7	-49.5		
268.0 32969.8	-50.6		
257.4 33832.7	-49.5		
250.0 34456.7	-50.3		
225.6 36623.5	-55.6		
209.2 38184.6	-58.9		
200.0 39105.6	-59.8		
182.4 40976.4	-62.4		
172.6 42072.0	-60.7		
168.8 42553.1	-56.5		
161.6 43439.6	-52.5		
150.0 45026.4	-56.1		
126.8 48459.1	-63.3		

STATION ALTITUDE 3951.40 FEET MSL  
 15 MAR. 78 1530 HRS MST  
 ASCENSION NO. 10

SIGNIFICANT LEVEL DATA  
 074005C010  
 APACHE  
 TABLE IV. (CONT)

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
123.4 49004.6	-63.6	
116.2 50221.5	-59.6	
110.0 51340.3	-60.2	
100.0 53267.7	-63.3	
97.8 53713.7	-63.8	



STATION ALTITUDE 3951.40 FEET MSL  
15 MAR. 78 1530 HRS MST  
ASCENSION NO. 10

UPPER AIR DATA  
0740050010  
APACHE  
TABLE V.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
3951.4	885.4	13.4	-11.9	16.0	1075.3	659.8	20.0	9.9	1.000251
4000.0	883.9	13.3	-11.5	16.5	1073.6	659.7	19.1	9.7	1.000251
4500.0	868.0	12.3	-9.3	21.1	1057.9	658.6	8.2	8.1	1.000250
5000.0	852.3	9.9	-10.9	21.9	1047.9	655.8	352.7	6.9	1.000246
5500.0	836.5	8.4	-11.8	22.5	1033.9	654.0	332.7	6.3	1.000242
6000.0	820.9	7.1	-12.6	23.1	1019.4	652.5	312.0	6.6	1.000238
6500.0	805.5	5.8	-13.4	23.7	1005.1	651.0	296.9	8.3	1.000234
7000.0	793.5	4.5	-14.2	24.2	991.0	649.4	290.5	11.6	1.000231
7500.0	775.7	3.1	-15.0	24.8	977.2	647.9	287.9	14.8	1.000227
8000.0	761.3	1.8	-15.9	25.4	963.6	646.3	293.2	17.7	1.000224
8500.0	747.0	.5	-16.7	26.0	950.1	644.7	296.9	20.7	1.000220
9000.0	733.1	-.8	-17.6	26.6	936.9	643.2	304.4	23.2	1.000217
9500.0	719.4	-2.1	-18.5	27.2	923.9	641.6	311.7	25.9	1.000213
10000.0	706.0	-3.4	-19.4	27.7	911.1	640.1	314.6	28.6	1.000210
10500.0	692.6	-4.6	-20.4	27.6	897.9	638.6	314.4	31.1	1.000206
11000.0	679.2	-5.8	-21.5	27.6	884.4	637.2	313.8	34.0	1.000203
11500.0	666.1	-6.9	-22.6	27.3	871.2	635.8	312.8	37.5	1.000199
12000.0	653.2	-8.1	-23.7	27.0	858.1	634.4	313.7	41.9	1.000196
12500.0	640.5	-8.3	-24.8	24.9	842.1	634.2	316.8	48.0	1.000192
13000.0	628.1	-8.5	-26.0	22.7	826.3	633.9	319.2	54.2	1.000188
13500.0	615.8	-8.7	-27.2	20.5	810.8	633.7	321.2	60.6	1.000184
14000.0	603.8	-9.1	-28.4	18.9	796.2	633.2	322.6	64.9	1.000181
14500.0	592.0	-9.9	-29.3	18.6	783.2	632.1	323.7	68.1	1.000177
15000.0	580.3	-10.6	-30.2	18.4	770.5	631.1	324.1	70.5	1.000174
15500.0	569.0	-11.7	-31.1	18.1	757.9	630.0	324.3	72.4	1.000171
16000.0	557.7	-12.5	-31.6	18.4	745.2	629.1	324.4	74.9	1.000168
16500.0	546.7	-13.2	-31.9	19.0	732.5	628.2	324.4	77.9	1.000166
17000.0	535.7	-14.5	-32.4	19.9	721.3	626.7	324.3	77.8	1.000163
17500.0	525.0	-15.7	-33.0	20.8	710.2	625.2	324.0	76.9	1.000160
18000.0	514.5	-17.0	-33.7	21.7	699.4	623.6	323.0	75.5	1.000158

UPPER AIR DATA  
 074005CC10  
 APACHE  
 TABLE V. (CONT)

STATION ALTITUDE 3951.40 FEET MSL  
 15 MAR. 78  
 ASCENSION NO. 10

GEODETIC COORDINATES  
 32.62700 LAT DEG  
 106.39352 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
18500.0	504.2	-18.2	22.6	688.7	622.1	321.7	75.8	1.000155
19000.0	493.9	-19.3	22.9	677.8	620.7	320.2	80.2	1.000153
19500.0	483.8	-20.4	22.7	666.8	619.4	318.7	84.3	1.000150
20000.0	473.9	-21.5	22.5	655.9	618.1	317.0	86.2	1.000148
20500.0	464.2	-22.6	22.3	645.3	616.7	314.7	84.6	1.000145
21000.0	454.7	-23.7	22.1	634.8	615.4	312.4	79.9	1.000143
21500.0	445.3	-25.2	22.0	625.5	613.5	310.4	77.4	1.000140
22000.0	436.0	-25.8	21.0	614.1	612.7	308.8	77.4	1.000138
22500.0	426.9	-26.5	20.1	602.8	611.9	307.4	79.8	1.000135
23000.0	417.9	-27.5	20.7	592.7	610.6	306.1	62.5	1.000133
23500.0	409.1	-28.6	21.3	582.9	609.2	304.4	80.6	1.000131
24000.0	400.5	-29.7	22.0	573.2	607.8	302.5	78.1	1.000128
24500.0	392.0	-31.0	22.0	563.9	606.3	299.5	73.0	1.000126
25000.0	383.6	-32.3	22.0	554.3	604.7	296.0	69.0	1.000124
25500.0	375.4	-33.6	22.0	545.8	603.0	292.4	69.8	1.000122
26000.0	367.3	-34.4	22.4	536.0	602.0	288.9	71.2	1.000120
26500.0	359.4	-35.0	23.0	525.6	601.3	285.9	75.3	1.000118
27000.0	351.5	-36.1	19.3**	516.6	599.8	283.3	79.2	1.000115
27500.0	343.8	-37.4	15.5**	507.9	598.2	280.6	80.5	1.000113
28000.0	336.2	-38.6	11.6**	499.3	596.7	278.3	81.7	1.000111
28500.0	328.8	-39.8	7.8**	490.8	595.2	277.5	81.9	1.000109
29000.0	321.6	-41.0	3.9**	482.5	593.6	277.0	82.1	1.000108
29500.0	314.5	-42.2	.1**	474.4	592.1	277.7	92.4	1.000106
30000.0	307.4	-43.7		466.7	590.1	276.5	83.2	1.000104
30500.0	300.5	-45.2		459.3	588.2	279.6	84.8	1.000102
31000.0	293.7	-46.5		451.5	586.5	280.2	85.8	1.000101
31500.0	287.0	-47.9		443.6	584.7	281.1	85.9	1.000099
32000.0	280.4	-49.2		436.2	583.0	282.7	84.5	1.000097
32500.0	274.0	-50.0		427.7	582.0	283.7	77.4	1.000095
33000.0	267.6	-50.6		418.8	581.2	284.7	68.8	1.000093

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.



GEODETIC COORDINATES  
32.62700 LAT DEG  
106.39352 LON DEG

UPPER AIR DATA  
0740000010  
APACHE  
TABLE V. (CONT)

STATION ALTITUDE 3451.40 FEET MSL  
15 MAR. 78  
ASCENSION NO. 10

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
33500.0	261.4	-49.9			408.0	582.1	262.7	60.8	1.000091
34000.0	255.4	-49.7			396.2	582.3	280.3	55.7	1.000089
34500.0	249.5	-50.4			393.2	581.4	279.6	63.3	1.000087
35000.0	243.6	-51.6			383.2	579.8	279.0	70.9	1.000065
35500.0	237.9	-52.9			376.3	578.2	278.8	76.8	1.000084
36000.0	232.4	-54.1			369.5	576.6	278.7	82.4	1.000082
36500.0	226.9	-55.3			362.9	575.0	278.5	85.7	1.000081
37000.0	221.5	-56.4			356.0	573.6	277.9	83.0	1.000079
37500.0	216.2	-57.5			349.2	572.2	277.7	80.6	1.000078
38000.0	211.1	-58.5			342.6	570.8	278.9	79.2	1.000076
38500.0	206.0	-59.2			335.4	569.8	280.3	78.2	1.000075
39000.0	201.0	-59.7			328.1	569.2	281.7	76.0	1.000073
39500.0	196.2	-60.3			321.1	568.3	282.5	79.3	1.000072
40000.0	191.4	-61.0			314.3	567.4	282.3	82.8	1.000070
40500.0	186.7	-61.7			307.7	566.4	281.3	87.0	1.000069
41000.0	182.2	-62.4			301.1	565.6	279.4	92.2	1.000067
41500.0	177.7	-61.6			292.7	566.7	278.0	97.7	1.000065
42000.0	173.4	-60.8			284.5	567.7	277.0	103.7	1.000063
42500.0	169.2	-57.0			272.7	572.8	277.4	107.4	1.000061
43000.0	165.2	-54.5			263.2	576.1	278.1	109.5	1.000059
43500.0	161.3	-52.6			254.9	578.5	276.9	95.0	1.000057
44000.0	157.5	-53.6			250.2	577.0	275.6	81.9	1.000056
44500.0	153.6	-54.9			245.5	575.5	274.5	71.9	1.000055
45000.0	150.2	-56.0			241.0	574.0	274.0	66.0	1.000054
45500.0	146.6	-57.1			236.3	572.6	276.3	71.7	1.000053
46000.0	143.0	-58.1			231.7	571.2	278.2	77.3	1.000052
46500.0	139.6	-59.2			227.2	569.9	278.6	81.4	1.000051
47000.0	136.2	-60.2			222.8	568.5	279.0	85.4	1.000050
47500.0	132.9	-61.3			218.5	567.1	277.6	81.9	1.000049
48000.0	129.7	-62.3			214.3	565.6	276.1	78.1	1.000048

UPPER AIR DATA  
 0740050010  
 APACHE  
 TABLE V. (CONT)

STATION ALTITUDE 3951.40 FEET MSL  
 15 MAR. 78  
 1530 HRS MST  
 ASCENSION NO. 10

GEODETIC COORDINATES  
 32.62700 LAT DEG  
 106.39352 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
48500.0	126.5	-63.3	210.1	564.3		275.0	72.8	1.000047
49000.0	123.4	-63.6	235.2	564.0		274.4	68.7	1.000046
49500.0	120.4	-62.0	198.6	566.1		275.9	68.6	1.000044
50000.0	117.5	-60.3	192.3	568.3		278.1	71.1	1.000043
50500.0	114.6	-59.7	187.1	569.1		281.2	79.0	1.000042
51000.0	111.8	-60.0	182.6	568.7		283.4	84.8	1.000041
51500.0	109.1	-60.5	178.7	568.2		284.7	86.2	1.000040
52000.0	106.5	-61.3	175.0	567.1				1.000039
52500.0	103.9	-62.1	171.4	566.0				1.000038
53000.0	101.3	-62.9	167.9	564.9				1.000037
53500.0	98.8	-63.6	164.3	564.0				1.000037



STATION ALTITUDE 3951.40 FEET MSL  
15 MAR. 78  
ASCENSION NO. 10

MANDATORY LEVELS  
U74005CU10  
APACHE  
TABLE VI.

GEODETIC COORDINATES  
32.62700 LAT NEG  
106.39352 LONG DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES(7P)	SPEED KNOTS
850.0	5073.	9.5	-11.1	22.	349.9	0.7
800.0	6709.	5.3	-13.7	24.	293.6	9.7
750.0	8424.	.8	-16.5	26.	296.4	20.3
700.0	10226.	-4.0	-19.8	28.	314.5	29.8
650.0	12128.	-8.1	-24.0	26.	314.6	43.5
600.0	14164.	-9.3	-28.7	19.	323.0	66.0
550.0	16355.	-13.0	-31.8	19.	324.4	77.0
500.0	18713.	-18.7	-34.6	23.	320.9	77.8
450.0	21261.	-24.3	-39.9	22.	311.0	77.4
400.0	24048.	-29.8	-44.6	22.	302.1	77.4
350.0	27125.	-36.4	-51.7	19.**	282.4	79.6
300.0	30570.	-45.3			274.8	65.2
250.0	34497.	-50.3			279.5	64.1
200.0	39161.	-59.8			282.4	77.9
175.0	41879.	-61.1			277.1	103.3
150.0	45103.	-56.1			275.0	68.2
125.0	48837.	-63.5			274.3	68.7
100.0	53379.	-63.3				

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

SIGNIFICANT LEVEL DATA  
0740020178  
WHITE SANDS  
TABLE VII.

STATION ALTITUDE 3989.00 FEET MSL  
15 MAR. 78  
ASCENSION NO. 178

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
883.8	16.9	-11.7	13.0
873.0	13.1	-10.0	19.0
850.0	11.1	-11.6	19.0
802.6	6.9	-15.1	19.0
762.6	3.1	-17.6	20.0
700.0	-3.2	-20.8	24.0
660.4	-7.0	-23.6	25.0
640.8	-7.5	-25.5	22.0
623.6	-9.2	-26.4	23.0
606.4	-9.2	-29.1	18.0
577.2	-10.0	-29.7	18.0
554.8	-11.6	-31.1	18.0
500.0	-17.6	-35.6	19.0
475.0	-21.1	-38.5	19.0
436.6	-25.1	-42.4	18.0
400.0	-28.3	-45.1	16.0
366.6	-32.0	-47.8	19.0
360.8	-33.3	-48.9	19.0
315.6	-42.4		
300.0	-45.1		
274.2	-49.6		
268.4	-50.3		
257.8	-49.1		
250.0	-49.9		
215.0	-58.4		
201.2	-60.0		
200.0	-59.9		
183.2	-61.4		
180.2	-61.4		
176.4	-55.2		

STATION ALTITUDE 3969.00 FEET MSL  
15 MAR. 78 1557 HRS MST  
ASCENSION NO. 178

SIGNIFICANT LEVEL DATA  
0740020178  
WHITE SANDS  
TABLE VII. (CONT)

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
173.8	42058.0	-54.2
169.6	42570.2	-54.8
165.6	43069.9	-54.2
161.4	43609.6	-53.2
150.0	45141.6	-56.2
138.0	46858.4	-59.9
124.2	48991.0	-63.4
116.8	50225.2	-63.0
107.7	51862.3	-61.4
103.8	52608.7	-61.8
100.0	53359.9	-63.4
85.6	56448.5	-67.5
79.4	57930.6	-66.5
72.4	59750.9	-67.2
70.0	60414.9	-67.0
59.0	63774.2	-68.1
52.0	66280.5	-62.8
50.0	67069.2	-62.5
45.8	68835.5	-62.3
43.4	69929.2	-58.5
33.4	75267.9	-60.8
30.0	77461.2	-57.4
28.4	78586.7	-58.5
26.0	80410.6	-54.8
22.2	83718.9	-52.5
20.0	85929.3	-49.6
14.3	93186.7	-42.8
11.9	97280.6	-35.7



STATION ALTITUDE 3989.00 FEET MSL  
15 MAR. 78 1557 HRS MST  
ASCENSION NO. 178

UPPER AIR DATA  
0740020178  
WHITE SANDS  
TABLE VIII.

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION (TN) DEGREES	WIND SPEED (TN) KNOTS	INDEX OF REFRACTION
3989.0	883.8	16.9	13.0	1060.4	663.8	.0	.0	1.000247
4000.0	883.5	16.8	13.2	1060.4	663.7			1.000248
4500.0	867.7	12.6	19.0	1056.4	659.0			1.000248
5000.0	852.1	11.3	19.0	1042.4	657.4			1.000244
5500.0	836.5	9.9	19.0	1028.4	655.8			1.000240
6000.0	821.3	8.6	19.0	1014.5	654.2			1.000236
6500.0	806.3	7.2	19.0	1000.5	652.6			1.000232
7000.0	791.4	5.9	19.3	987.3	651.0	283.8	12.1	1.000229
7500.0	776.7	4.5	19.6	973.5	649.4	286.4	13.2	1.000225
8000.0	762.3	3.1	20.0	960.7	647.7	286.2	15.1	1.000222
8500.0	748.0	1.7	20.9	947.4	646.1	286.9	18.4	1.000218
9000.0	733.9	.3	21.8	934.3	644.4	291.3	21.9	1.000215
9500.0	720.0	-1.1	22.7	921.5	642.7	296.1	25.3	1.000212
10000.0	706.4	-2.5	23.6	908.8	641.1	301.1	28.8	1.000209
10500.0	693.0	-3.9	24.2	895.9	639.5	305.3	30.4	1.000205
11000.0	679.6	-5.1	24.5	882.9	638.0	309.3	31.1	1.000202
11500.0	666.6	-6.4	24.8	870.0	636.5	312.5	32.9	1.000199
12000.0	653.7	-7.2	24.0	855.8	635.1	315.3	35.1	1.000195
12500.0	641.0	-7.5	22.0	840.2	635.1	318.5	39.9	1.000191
13000.0	628.6	-8.7	22.7	827.7	633.7	321.0	44.7	1.000188
13500.0	616.3	-9.2	20.9	813.1	633.1	323.7	50.3	1.000185
14000.0	604.3	-9.3	18.0	797.4	633.0	326.3	56.4	1.000181
14500.0	592.5	-9.6	18.0	782.8	632.6	325.5	60.3	1.000177
15000.0	580.9	-9.9	18.0	768.4	632.2	324.1	63.4	1.000174
15500.0	569.5	-10.5	18.0	755.2	631.4	322.7	65.8	1.000171
16000.0	558.3	-11.3	18.0	742.6	630.4	322.7	67.0	1.000168
16500.0	547.2	-12.4	18.1	730.8	629.2	322.5	67.4	1.000165
17000.0	536.3	-13.6	18.3	719.5	627.6	321.7	66.6	1.000162
17500.0	525.6	-14.7	18.5	708.3	626.4	320.5	67.2	1.000160
18000.0	515.1	-15.9	18.7	697.3	624.9	319.2	68.2	1.000157

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

UPPER AIR DATA  
 0740020178  
 WHITE SANDS  
 TABLE VIII. (CONT)

STATION ALTITUDE 3989.00 FEET MSL  
 15 MAR. 78 1557 HRS MST  
 ASCENSION NO. 178

6FODETC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND (ATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
18500.0	504.8	-17.0	18.9	686.5	623.5	317.9	70.7	1.000155
19000.0	494.7	-18.3	19.0	676.1	621.9	316.7	73.3	1.000152
19500.0	484.6	-19.7	19.0	666.1	620.2	315.5	75.4	1.000150
20000.0	474.8	-21.1	19.0	656.1	618.5	314.4	77.3	1.000147
20500.0	465.0	-22.1	18.7	645.2	617.3	313.2	78.2	1.000145
21000.0	455.4	-23.1	18.5	634.4	616.1	312.1	78.6	1.000142
21500.0	446.0	-24.1	18.3	623.7	614.9	310.8	76.8	1.000140
22000.0	436.8	-25.1	18.0	613.3	613.6	309.5	74.3	1.000137
22500.0	427.7	-25.9	18.0	602.4	612.7	308.0	70.0	1.000135
23000.0	418.7	-26.6	18.0	591.6	611.7	306.0	65.7	1.000133
23500.0	410.0	-27.4	18.0	581.1	610.7	303.4	61.4	1.000130
24000.0	401.4	-28.2	18.0	570.7	609.8	299.3	59.1	1.000128
24500.0	392.9	-29.1	18.2	560.7	608.7	294.6	57.9	1.000126
25000.0	384.5	-30.0	18.5	550.8	607.5	290.2	58.9	1.000123
25500.0	376.4	-30.9	18.7	541.2	606.4	286.1	60.4	1.000121
26000.0	368.4	-31.8	18.9	531.7	605.3	283.7	61.6	1.000119
26500.0	360.5	-33.4	18.9**	523.7	603.3	281.6	63.0	1.000117
27000.0	352.6	-34.9	15.7**	515.5	601.4	280.8	65.4	1.000115
27500.0	344.9	-36.4	12.6**	507.4	599.5	280.1	67.7	1.000113
28000.0	337.3	-37.9	9.4**	499.5	597.6	279.7	69.8	1.000111
28500.0	329.9	-39.4	6.3**	491.7	595.7	279.2	72.0	1.000110
29000.0	322.7	-40.9	3.2**	484.0	593.7	278.5	72.1	1.000108
29500.0	315.6	-42.4	0.0**	476.5	591.8	277.6	71.9	1.000106
30000.0	308.5	-43.6		468.2	590.2	277.6	71.4	1.000104
30500.0	301.6	-44.8		460.1	588.7	278.0	70.7	1.000102
31000.0	294.7	-46.0		452.0	587.2	279.2	70.5	1.000101
31500.0	288.0	-47.1		443.5	585.7	280.8	70.6	1.000099
32000.0	281.4	-48.3		436.3	584.2	281.9	69.8	1.000097
32500.0	275.0	-49.5		428.3	582.7	282.9	66.9	1.000095
33000.0	268.7	-50.3		419.9	581.6	283.0	67.9	1.000094

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE HAS BEEN USED IN THE INTERPOLATION.



UPPER AIR DATA  
 0740020178  
 WHITE SANDS  
 TABLE VIII. (CONT)

STATION ALTITUDE 3989.00 FEET MSL  
 15 MAR. 78  
 ASCENSION NO. 178

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
33500.0	262.5	-49.6		409.1	582.4	282.7	67.1	1.000091
34000.0	256.4	-49.2		398.5	582.9	281.4	66.6	1.000089
34500.0	250.5	-49.8		390.8	582.2	279.9	66.1	1.000087
35000.0	244.6	-51.1		383.8	580.5	278.4	65.1	1.000085
35500.0	238.8	-52.5		377.0	578.7	276.8	64.1	1.000084
36000.0	233.2	-53.8		370.4	577.0	276.5	65.5	1.000083
36500.0	227.7	-55.2		363.9	575.2	276.4	67.1	1.000081
37000.0	222.4	-56.5		357.6	573.4	276.8	70.0	1.000080
37500.0	217.1	-57.8		351.3	571.6	277.6	73.8	1.000078
38000.0	211.9	-58.7		344.4	570.4	278.1	76.6	1.000077
38500.0	206.8	-59.3		337.0	569.7	278.0	77.5	1.000075
39000.0	201.9	-59.9		329.8	568.9	277.7	76.1	1.000073
39500.0	197.0	-60.2		322.1	568.6	276.3	76.6	1.000072
40000.0	192.2	-60.6		315.0	568.0	274.8	75.1	1.000070
40500.0	187.5	-61.0		307.9	567.4	272.4	73.3	1.000069
41000.0	183.0	-61.4		301.0	566.9	269.9	71.7	1.000067
41500.0	178.5	-58.7		290.0	570.5	267.9	69.8	1.000065
42000.0	174.3	-54.4		277.5	576.2	265.9	68.0	1.000062
42500.0	170.2	-54.7		271.4	575.8	266.3	66.4	1.000060
43000.0	166.2	-54.3		264.5	576.3	267.3	64.8	1.000059
43500.0	162.2	-53.4		257.2	577.5	269.0	64.7	1.000057
44000.0	158.4	-54.0		251.8	576.8	270.9	65.0	1.000056
44500.0	154.7	-54.9		246.9	575.5	272.2	66.0	1.000055
45000.0	151.0	-55.9		242.2	574.2	272.9	67.4	1.000054
45500.0	147.4	-57.0		237.5	572.8	273.6	68.8	1.000053
46000.0	143.9	-58.1		233.0	571.4	274.4	69.6	1.000052
46500.0	140.4	-54.1		228.6	569.9	275.2	70.5	1.000051
47000.0	137.0	-60.1		224.1	568.6	275.8	71.3	1.000050
47500.0	133.7	-61.0		219.5	567.5	276.4	72.1	1.000049
48000.0	130.4	-61.8		215.0	566.4	276.0	72.5	1.000048

STATION ALTITUDE 3989.00 FEET MSL  
15 MAR. 78 1557 HRS MST  
ASCENSION NO. 178

UPPER AIR DATA  
0740020178  
WHITE SANDS  
TABLE VIII. (CONT)

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
4800.0	127.2	-62.6			210.5	565.3		274.9	72.6	1.000047
4900.0	124.1	-63.4			206.2	564.2		273.7	71.9	1.000046
4950.0	121.1	-63.2			201.0	564.4		272.5	69.0	1.000045
5000.0	118.1	-63.1			195.9	564.7		271.5	66.1	1.000044
5050.0	115.2	-62.7			190.8	565.1		273.2	62.1	1.000042
5100.0	112.4	-62.2			185.7	565.8		275.2	58.2	1.000041
5150.0	109.7	-61.8			180.7	566.4		277.7	55.8	1.000040
5200.0	107.0	-61.5			176.0	566.8		280.5	53.7	1.000039
5250.0	104.4	-61.7			172.0	566.4		281.3	53.0	1.000038
5300.0	101.8	-62.6			168.5	565.2		281.2	52.9	1.000038
5350.0	99.3	-63.6			165.1	564.0		280.3	52.8	1.000037
5400.0	96.8	-64.2			161.5	563.1		278.5	52.6	1.000036
5450.0	94.4	-64.9			158.0	562.2		276.7	52.1	1.000035
5500.0	92.1	-65.6			154.5	561.3		274.8	49.4	1.000034
5550.0	89.8	-66.2			151.2	560.4		272.7	46.8	1.000034
5600.0	87.6	-66.9			147.9	559.5		271.0	44.3	1.000033
5650.0	85.4	-67.5			144.6	558.7		269.2	41.8	1.000032
5700.0	83.2	-67.1			140.7	559.2		268.3	40.3	1.000031
5750.0	81.2	-66.8			137.0	559.6		268.8	39.9	1.000031
5800.0	79.1	-66.5			133.4	560.0		269.5	39.6	1.000030
5850.0	77.1	-66.7			130.2	559.7		272.2	39.6	1.000029
5900.0	75.2	-66.9			127.0	559.5		275.0	39.6	1.000028
5950.0	73.3	-67.1			124.0	559.2		277.7	39.3	1.000028
6000.0	71.5	-67.1			120.9	559.2		280.4	38.8	1.000027
6050.0	69.7	-67.0			117.8	559.3		283.1	38.4	1.000026
6100.0	67.9	-67.2			114.9	559.1		284.0	37.8	1.000026
6150.0	66.2	-67.4			112.1	558.9		284.9	37.2	1.000025
6200.0	64.6	-67.5			109.4	558.7		284.8	36.8	1.000024
6250.0	63.0	-67.7			106.7	558.4		283.5	36.6	1.000024
6300.0	61.4	-67.8			104.1	558.2		282.1	36.5	1.000023



GFODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
0740020178  
WHITE SANDS  
TABLE VIII. (CONT)

STATION ALTITUDE 3969.00 FEET MSL  
15 MAR. 78 1557 HRS MST  
ASCENSION NO. 178

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
63500.0	59.8	-68.0		101.6	558.0	279.9	36.6	1.000023
64000.0	58.3	-67.6		98.9	558.5	277.5	36.9	1.000022
64500.0	56.9	-66.6		95.9	559.9	275.5	37.2	1.000021
65000.0	55.5	-65.5		93.1	561.4	274.7	37.7	1.000021
65500.0	54.1	-64.5		90.3	562.8	273.8	38.3	1.000020
66000.0	52.7	-63.4		87.6	564.2	273.7	37.3	1.000020
66500.0	51.4	-62.7		85.1	565.1	274.2	35.4	1.000019
67000.0	50.2	-62.5		83.0	565.4	274.7	33.4	1.000018
67500.0	48.9	-62.5		80.9	565.5	275.6	30.6	1.000018
68000.0	47.7	-62.4		78.9	565.6	276.7	27.8	1.000018
68500.0	46.6	-62.3		77.0	565.6	278.0	25.2	1.000017
69000.0	45.4	-61.7		74.9	566.5	279.2	23.7	1.000017
69500.0	44.3	-60.0		72.4	568.8	280.5	22.2	1.000016
70000.0	43.2	-58.5		70.2	570.7	281.7	20.6	1.000016
70500.0	42.2	-58.7		68.6	570.4	282.0	18.4	1.000015
71000.0	41.2	-59.0		67.0	570.2	282.5	16.3	1.000015
71500.0	40.2	-59.2		65.4	569.9	282.8	14.4	1.000015
72000.0	39.2	-59.4		63.9	569.6	282.7	12.8	1.000014
72500.0	38.3	-59.6		62.4	569.3	282.6	11.3	1.000014
73000.0	37.3	-59.8		61.0	569.0	282.4	10.8	1.000014
73500.0	36.4	-60.0		59.5	568.7	282.2	11.0	1.000013
74000.0	35.5	-60.3		58.2	568.4	282.1	11.3	1.000013
74500.0	34.7	-60.5		56.8	568.1	282.4	13.3	1.000013
75000.0	33.8	-60.7		55.5	567.9	282.8	16.0	1.000012
75500.0	33.0	-60.4		54.1	568.2	283.1	18.7	1.000012
76000.0	32.2	-59.7		52.6	569.2	283.1	20.6	1.000012
76500.0	31.4	-58.9		51.1	570.3	283.1	22.2	1.000011
77000.0	30.7	-58.1		49.7	571.3	283.1	23.9	1.000011
77500.0	29.9	-57.4		48.4	572.2	282.8	23.6	1.000011
78000.0	29.2	-57.9		47.3	571.5	282.5	22.9	1.000011

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
0740020178  
WHITE SANDS  
TABLE VIII. (CONT)

STATION ALTITUDE 3989.00 FEET MSL  
15 MAR. 78 1557 HRS MST  
ASCENSION NO. 178

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
78500.0	28.5	-58.4			46.3	570.9	282.2	22.2	1.000010
79000.0	27.8	-57.7			45.0	571.9	283.8	22.6	1.000010
79500.0	27.2	-56.6			43.7	573.2	285.6	23.3	1.000010
80000.0	26.5	-55.6			42.5	574.6	287.3	23.9	1.000009
80500.0	25.9	-54.7			41.3	575.7	289.5	24.0	1.000009
81000.0	25.3	-54.4			40.3	576.2	291.7	24.1	1.000009
81500.0	24.7	-54.0			39.2	576.7	293.9	24.2	1.000009
82000.0	24.1	-53.7			38.3	577.1	294.1	23.4	1.000009
82500.0	23.5	-53.3			37.3	577.6	294.0	22.5	1.000008
83000.0	23.0	-53.0			36.4	578.0	293.9	21.5	1.000008
83500.0	22.4	-52.7			35.4	578.5	292.0	22.4	1.000008
84000.0	21.9	-52.1			34.5	579.2	290.0	23.3	1.000008
84500.0	21.4	-51.5			33.6	580.0	288.4	24.4	1.000007
85000.0	20.9	-50.8			32.7	580.9	287.6	25.8	1.000007
85500.0	20.4	-50.2			31.9	581.7	286.8	27.2	1.000007
86000.0	19.9	-49.5			31.1	582.6	285.9	26.4	1.000007
86500.0	19.5	-49.1			30.3	583.2	284.6	29.0	1.000007
87000.0	19.0	-48.6			29.5	583.8	283.3	29.7	1.000007
87500.0	18.6	-48.1			28.8	584.4	281.3	30.6	1.000006
88000.0	18.2	-47.7			28.1	585.0	278.7	31.6	1.000006
88500.0	17.8	-47.2			27.4	585.6	276.3	32.7	1.000006
89000.0	17.4	-46.7			26.7	586.2	274.3	33.8	1.000006
89500.0	17.0	-46.3			26.0	586.8	272.5	34.9	1.000006
90000.0	16.6	-45.8			25.4	587.4	270.9	36.0	1.000006
90500.0	16.2	-45.3			24.8	588.0	271.8	37.8	1.000006
91000.0	15.6	-44.8			24.1	588.6	272.9	39.6	1.000005
91500.0	15.5	-44.4			23.5	589.2	274.0	41.5	1.000005
92000.0	15.1	-43.9			23.0	589.8	276.8	44.0	1.000005
92500.0	14.8	-43.4			22.4	590.4	279.3	46.6	1.000005
93000.0	14.4	-43.0			21.8	591.0	281.4	48.7	1.000005

UPPER AIR DATA  
0740020178  
WHITE SANDS  
TABLE VIII. (CONT)

STATION ALTITUDE 3969.00 FEET MSL  
15 MAR. 78 1557 HRS MST  
ASCENSION NO. 178

GEODETIC COORDINATES  
32.40043 LAT NEG  
106.37033 LON DEG

GEOPETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND [ATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
93500.0	14.1	-42.3			21.3	592.0	282.8	48.6	1.000005
94000.0	13.8	-41.4			20.7	593.1	284.3	48.5	1.000005
94500.0	13.5	-40.5			20.2	594.2	285.4	48.1	1.000004
95000.0	13.2	-39.7			19.7	595.3	285.8	46.8	1.000004
95500.0	12.9	-38.8			19.2	596.4	286.2	45.5	1.000004
96000.0	12.6	-37.9			18.7	597.5			1.000004
96500.0	12.3	-37.1			18.2	598.6			1.000004
97000.0	12.1	-36.2			17.7	599.7			1.000004



STATION ALTITUDE 3489.00 FEET MSL  
15 MAR. 78  
ASCENSION NO. 178

MANDATORY LEVELS  
0740020178  
WHITE SANDS  
TABLE IX.

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5065.	11.1	-11.6	19.	9999.0	9999.0XX
800.0	6710.	6.7	-15.3	19.	282.6	10.6
750.0	8432.	1.9	-18.2	21.	286.2	17.9
700.0	10240.	-3.2	-20.8	24.	303.2	30.1
650.0	12147.	-7.3	-24.6	23.	316.4	36.5
600.0	14182.	-9.4	-29.2	18.	326.2	58.1
550.0	16380.	-12.1	-31.4	18.	322.6	67.5
500.0	18747.	-17.6	-35.6	19.	317.3	72.1
450.0	21301.	-23.7	-41.0	18.	311.3	77.5
400.0	24098.	-28.3	-45.1	18.	298.2	58.8
350.0	27200.	-35.4	-52.8	15.**	280.4	66.5
300.0	30647.	-45.1			278.3	70.5
250.0	34582.	-49.9			279.5	65.8
200.0	39243.	-59.9			276.8	77.1
175.0	41978.	-54.7			265.6	67.8
150.0	45217.	-56.2			273.3	68.4
125.0	48953.	-63.2			273.6	71.5
100.0	53471.	-63.4			279.9	52.7
80.0	57914.	-66.6			269.9	39.6
70.0	60561.	-67.0			283.5	38.1
60.0	63607.	-68.0			278.4	36.8
50.0	67253.	-62.5			275.6	30.8
40.0	71810.	-59.2			282.7	12.7
30.0	77712.	-57.4			282.5	22.9
25.0	81506.	-54.2			294.1	23.7
20.0	86243.	-49.6			284.3	29.2
15.0	92504.	-43.8			281.1	48.7

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

GEODETIC COORDINATES  
32.88497 LAT DEG  
106.49714 LON DEG

SIGNIFICANT LEVEL DATA  
0740220001  
NW 30  
TABLE X.

STATION ALTITUDE 4010.40 FEET MSL  
15 MAR. 78  
ASCENSION NO. 1

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
882.8	4010.4	15.1	-9.0	18.0
870.8	4392.3	13.1	-10.0	19.0
850.0	5056.3	11.5	-10.6	20.0
817.6	6113.0	7.4	-10.8	26.0
797.4	6788.1	7.3	-10.0	28.0
775.8	7526.7	5.6	-13.3	24.0
700.0	10241.2	-2.7	-18.2	29.0
670.6	11350.4	-5.7	-20.5	30.0
633.2	12818.2	-8.2	-24.2	26.0
555.6	16126.4	-11.2	-29.6	20.0
500.0	18744.9	-17.8	-32.6	26.0
476.0	19942.6	-21.2	-35.5	26.0
446.8	21463.9	-24.3	-39.0	24.0
410.0	23501.4	-27.9	-43.4	21.0
400.0	24081.3	-28.8	-43.7	22.0
387.8	24805.5	-30.0	-44.7	22.0
374.6	25613.1	-30.1	-44.8	22.0
343.2	27630.2	-35.7	-49.7	22.0
311.6	29802.0	-41.6		
300.0	30639.4	-44.2		
260.8	33671.2	-50.3		
250.0	34572.6	-51.2		
229.2	36410.7	-53.4		
205.0	38735.7	-57.9		
200.0	39245.0	-57.7		
178.0	41621.6	-62.7		
174.0	42081.0	-61.4		
164.2	43273.9	-55.1		
153.6	44664.1	-56.0		
150.0	45155.5	-57.4		

STATION ALTITUDE 4010.40 FEET MSL  
15 MAR. 78 1557 HRS MST  
ASCENSION NO. 1

### SIGNIFICANT LEVEL DATA

0740220C01

05 AM

TABLE X. (CONT)

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR	DEWPOINT DEGREES	CENTIGRADE	REL. HUM. PERCENT
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142.6	46194.7	-59.7
128.8	48267.7	-61.0
125.4	48814.0	-58.5
115.0	50587.2	-59.7
111.8	51161.8	-61.0
100.0	53414.2	-63.1
96.1	54211.2	-64.3

REL. HUM.  
PERCENT



STATION ALTITUDE 4010.40 FEET MSL  
 15 MAR. 78 1557 HRS MST  
 ASCENSION NO. 1

UPPER AIR DATA  
 0740220C01  
 NW 30  
 TABLE XI.

GEODETIC COORDINATES  
 32.88497 LAT DEG  
 100.49714 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
4010.4	882.8	15.1	-9.0	18.0	1065.5	661.9	120.0	15.9	1.000251
4500.0	867.4	12.8	-10.1	19.2	1055.3	659.2			1.000248
5000.0	851.7	11.6	-10.6	19.9	1040.6	657.8			1.000245
5500.0	836.2	9.8	-10.6	22.5	1028.4	655.7			1.000242
6000.0	821.0	7.8	-10.8	25.4	1016.6	653.4			1.000239
6500.0	806.0	7.3	-10.3	27.1	999.7	652.9			1.000236
7000.0	791.1	6.8	-10.9	26.9	983.2	652.3			1.000232
7500.0	776.6	5.7	-13.2	24.1	969.3	650.9			1.000227
8000.0	762.0	4.2	-14.1	24.9	956.3	649.1			1.000223
8500.0	747.7	2.6	-15.0	25.8	943.6	647.3			1.000220
9000.0	733.7	1.1	-15.9	26.7	931.1	645.4			1.000216
9500.0	719.9	-4	-16.8	27.6	918.8	643.6	302.2	20.1	1.000213
10000.0	706.4	-2.0	-17.8	28.6	906.7	641.8	301.7	22.7	1.000210
10500.0	693.0	-3.4	-18.7	29.2	894.3	640.1	306.2	25.3	1.000206
11000.0	679.8	-4.8	-19.7	29.7	881.7	638.5	311.1	28.0	1.000203
11500.0	666.7	-6.0	-20.8	29.6	868.7	637.0	313.2	29.7	1.000200
12000.0	653.8	-6.8	-22.1	28.2	854.6	636.0	314.8	31.6	1.000196
12500.0	641.1	-7.7	-23.4	26.9	840.8	634.9	315.0	34.7	1.000192
13000.0	628.7	-8.4	-24.5	25.7	826.7	634.1	316.0	38.8	1.000189
13500.0	616.4	-8.8	-25.3	24.8	811.9	633.5	318.0	44.4	1.000185
14000.0	604.3	-9.3	-26.1	23.9	797.4	633.0	320.5	49.6	1.000182
14500.0	592.5	-9.7	-26.9	22.9	783.2	632.4	323.0	54.8	1.000178
15000.0	580.9	-10.2	-27.7	22.0	769.2	631.9	324.1	57.8	1.000175
15500.0	569.5	-10.6	-28.6	21.1	755.5	631.3	324.5	60.2	1.000171
16000.0	558.4	-11.1	-29.4	20.2	742.0	630.8	324.2	61.5	1.000168
16500.0	547.3	-12.1	-30.0	20.9	730.2	629.5	324.3	63.0	1.000165
17000.0	536.4	-13.4	-30.5	22.0	719.2	628.0	324.3	64.3	1.000163
17500.0	525.7	-14.7	-31.1	23.1	708.3	626.4	324.0	64.5	1.000160
18000.0	515.2	-15.9	-31.6	24.3	697.6	624.9	322.9	63.9	1.000158
18500.0	505.0	-17.2	-32.3	25.4	687.0	623.4	321.6	63.5	1.000155
							320.9	64.6	

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.



GEODETIC COORDINATES  
32.88497 LAT DEG  
106.49714 LONG DEG

UPPER AIR DATA  
0740220001  
NW 30  
TABLE XI. (CONT)

STATION ALTITUDE 4010.40 FEET MSL  
15 MAR. 78 1557 HRS MST  
ASCENSION NO. 1

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
19000.0	494.8	-18.5	-33.2	26.0	676.8	621.7	320.5	65.5	1.000153
19500.0	484.7	-19.9	-34.4	26.0	666.7	620.0	320.2	66.3	1.000150
20000.0	474.9	-21.3	-35.7	25.9	656.7	618.3	319.2	67.2	1.000148
20500.0	465.1	-22.3	-36.8	25.3	645.8	617.0	318.3	68.2	1.000145
21000.0	455.5	-23.4	-37.9	24.6	635.1	615.8	317.4	69.6	1.000143
21500.0	446.1	-24.4	-39.1	23.9	624.6	614.5	316.6	71.7	1.000140
22000.0	436.8	-25.2	-40.1	23.2	613.7	613.4	315.5	74.2	1.000138
22500.0	427.7	-26.1	-41.2	22.5	603.1	612.3	314.1	75.6	1.000135
23000.0	418.8	-27.0	-42.3	21.7	592.6	611.2	312.8	76.6	1.000133
23500.0	410.0	-27.9	-43.4	21.0	582.3	610.1	311.5	74.4	1.000131
24000.0	401.4	-28.7	-43.7	21.9	571.9	609.2	309.8	66.1	1.000128
24500.0	392.9	-29.5	-44.3	22.0	561.7	608.1	305.4	52.6	1.000126
25000.0	384.6	-30.0	-44.8	22.0	551.0	607.5	296.0	43.7	1.000123
25500.0	376.4	-30.1	-44.8	22.0	539.4	607.4	291.9	55.2	1.000121
26000.0	368.4	-31.2	-45.8	22.0	530.3	606.0	290.9	63.4	1.000119
26500.0	360.5	-32.6	-47.0	22.0	521.9	604.3	290.4	71.2	1.000117
27000.0	352.7	-34.0	-48.2	22.0	513.6	602.5	288.3	71.7	1.000115
27500.0	345.1	-35.3	-49.4	22.0	505.6	600.8	285.9	71.2	1.000113
28000.0	337.6	-36.7	-52.1	18.3**	497.4	599.1	284.0	70.1	1.000111
28500.0	330.2	-38.1	-55.9	13.2**	489.3	597.3	282.3	68.9	1.000109
29000.0	322.9	-39.4	-60.8	8.1**	481.3	595.6	281.1	67.8	1.000107
29500.0	315.8	-40.8	-68.9	3.1**	473.5	593.9	280.0	66.8	1.000105
30000.0	308.8	-42.2			465.8	592.0	278.6	64.6	1.000104
30500.0	301.9	-43.8			458.5	590.0	277.5	62.6	1.000102
31000.0	295.0	-44.9			450.4	588.5	277.4	61.4	1.000100
31500.0	288.3	-45.9			442.0	587.2	277.9	60.9	1.000098
32000.0	281.7	-46.9			433.9	585.9	278.7	61.2	1.000097
32500.0	275.3	-47.9			425.8	584.6	280.0	63.6	1.000095
33000.0	269.0	-48.9			418.0	583.3	281.4	65.0	1.000093
33500.0	262.9	-50.0			410.3	582.0	282.1	63.1	1.000091

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4010.40 FEET MSL  
 15 MAR. 78 1557 HRS MST  
 ASCENSION NO. 1

UPPER AIR DATA  
 074022JCO1  
 NW 30  
 TABLE XI. (CONT)

GEODETTIC COORDINATES  
 32.88497 LAT DEG  
 106.49714 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			DIRECTION DEGREES(TN)	SPEED KNOTS			
34000.0	256.8	-50.6			402.0	581.1	280.6	53.4	1.000090	
34500.0	250.9	-51.1			393.6	580.5	277.6	42.3	1.000088	
35000.0	245.0	-51.7			385.4	579.7	278.2	41.0	1.000086	
35500.0	239.3	-52.3			377.5	578.9	281.0	49.1	1.000084	
36000.0	233.7	-52.9			369.6	578.2	282.0	59.4	1.000082	
36500.0	228.2	-53.6			362.1	577.3	280.8	63.1	1.000081	
37000.0	222.8	-54.5			355.1	576.0	276.4	54.0	1.000079	
37500.0	217.5	-55.5			348.2	574.7	270.1	43.0	1.000078	
38000.0	212.4	-56.5			341.4	573.5	265.6	35.2	1.000076	
38500.0	207.3	-57.4			334.8	572.2	268.8	33.8	1.000075	
39000.0	202.4	-57.8			327.4	571.7	279.2	44.0	1.000073	
39500.0	197.5	-58.2			320.2	571.1	285.6	59.9	1.000071	
40000.0	192.7	-59.3			313.9	569.7	288.9	77.3	1.000070	
40500.0	188.1	-60.3			307.9	568.3	288.0	81.1	1.000069	
41000.0	183.5	-61.4			301.9	566.9	284.8	75.8	1.000067	
41500.0	179.1	-62.4			296.1	565.5	275.7	59.0	1.000066	
42000.0	174.7	-61.6			287.7	566.6	260.0	41.8	1.000064	
42500.0	170.5	-59.2			277.6	569.9	235.3	31.5	1.000062	
43000.0	166.4	-56.5			267.6	573.4	234.2	30.3	1.000060	
43500.0	162.4	-55.2			259.7	575.1	251.0	35.6	1.000058	
44000.0	158.6	-55.6			253.9	574.7	269.4	51.1	1.000057	
44500.0	154.8	-55.9			248.2	574.2	277.5	66.6	1.000055	
45000.0	151.1	-57.0			243.5	572.8	281.6	80.2	1.000054	
45500.0	147.5	-58.2			239.0	571.2	282.9	88.1	1.000053	
46000.0	144.0	-59.3			234.5	569.7	282.4	90.3	1.000052	
46500.0	140.5	-59.9			229.5	568.9	280.5	86.2	1.000051	
47000.0	137.1	-60.2			224.2	568.5	275.5	71.3	1.000050	
47500.0	133.7	-60.5			219.1	568.1	268.9	58.8	1.000049	
48000.0	130.5	-60.8			214.1	567.7	260.2	49.7	1.000048	
48500.0	127.3	-59.9			208.1	568.9	253.4	44.8	1.000046	



GEODETIC COORDINATES  
32.88497 LAT DEG  
106.49714 LON DEG

UPPER AIR DATA  
0740220J01  
NW 30  
TABLE XI. (CONT)

STATION ALTITUDE 4010.40 FEET MSL  
15 MAR. 78 1557 HRS MST  
ASCENSION NO. 1

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
49000.0	124.3	-58.6			201.6	570.6		257.7	47.0	1.000045
49500.0	121.3	-59.0			197.2	570.2		265.5	51.6	1.000044
50000.0	118.3	-59.3			192.8	569.7		272.8	55.8	1.000043
50500.0	115.5	-59.6			188.4	569.3		278.1	57.5	1.000042
51000.0	112.7	-60.6			184.7	567.9		282.8	60.0	1.000041
51500.0	109.9	-61.3			180.8	567.0		286.9	64.1	1.000040
52000.0	107.3	-61.8			176.8	566.4		288.3	66.3	1.000039
52500.0	104.6	-62.2			172.8	565.8		288.2	67.4	1.000038
53000.0	102.1	-62.7			169.0	565.1		286.6		1.000037
53500.0	99.6	-63.2			165.2	564.4				1.000036
54000.0	97.1	-64.0			161.7	563.4				



STATION ALTITUDE 4010.40 FEET MSL  
15 MAR. 78  
ASCENSION NO. 1

MANDATORY LEVELS  
0740220001  
NW 30  
TABLE XII.

GEODETTIC COORDINATES  
32.88497 LAT DEG  
106.49714 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5055.	11.5	-10.6	20.	9999.0	9999.OXX
800.0	6699.	7.3	-10.1	28.	9999.0	9999.OXX
750.0	8428.	2.9	-14.9	26.	9999.0	9999.OXX
700.0	10242.	-2.7	-18.2	29.	308.7	26.6
650.0	12152.	-7.1	-22.5	28.	315.0	35.7
600.0	14169.	-9.4	-26.4	24.	323.5	56.1
550.0	16386.	-11.8	-29.9	21.	324.4	64.2
500.0	18753.	-17.8	-32.6	26.	320.6	65.2
450.0	21305.	-24.0	-38.6	24.	316.9	70.9
400.0	24098.	-28.8	-43.7	22.	308.9	62.6
350.0	27205.	-34.4	-48.6	22.	267.2	71.4
300.0	30671.	-44.2			277.5	62.1
250.0	34614.	-51.2			276.2	38.5
200.0	39301.	-57.7			284.3	55.4
175.0	42031.	-61.7			254.5	38.3
150.0	45233.	-57.4			262.5	85.4
125.0	48972.	-58.5			259.1	47.9
100.0	53527.	-63.1				

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.